

CITY OF SUNNYVALE



Sunnyvale, [City manager]

TOTAL PERFORMANCE MEASUREMENT

Munic admin. Sunnyvale
Labor prod. Civil employees
Admin. Methods Sunnyvale

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TOTAL PERFORMANCE MEASUREMENT

INTRODUCTION

The City of Sunnyvale proposes a study designed to assess and improve the effectiveness of its ability to deliver services to citizens. The city will apply the Total Performance Measurement (TPM) concept for the first time in a municipality. Total Performance Measurement integrates productivity data and attitude survey data and uses both industrial engineering and behavioral science approaches for total performance improvements. The Total Performance Measurement concept has never been applied in a city, so this study is a significant step in productivity research.

The following sections of this proposal describe the conceptual approach, work program, the project staff, and Sunnyvale's qualifications for Total Performance Measurement.

The approach to be used in this study is unique in that it combines the traditional methods of management science with the newer techniques of behavioral sciences. In brief, the city will be collecting and integrating objective measures of performances with measures of employees' attitudes and citizen attitudes. The city's interest is to improve effectiveness, and this is best accomplished with inputs from all three sources. For example, most performance measurement systems neglect entirely the inputs of employees -- what they see as helping or hindering their performance. And, unfortunately, attitude surveys usually take

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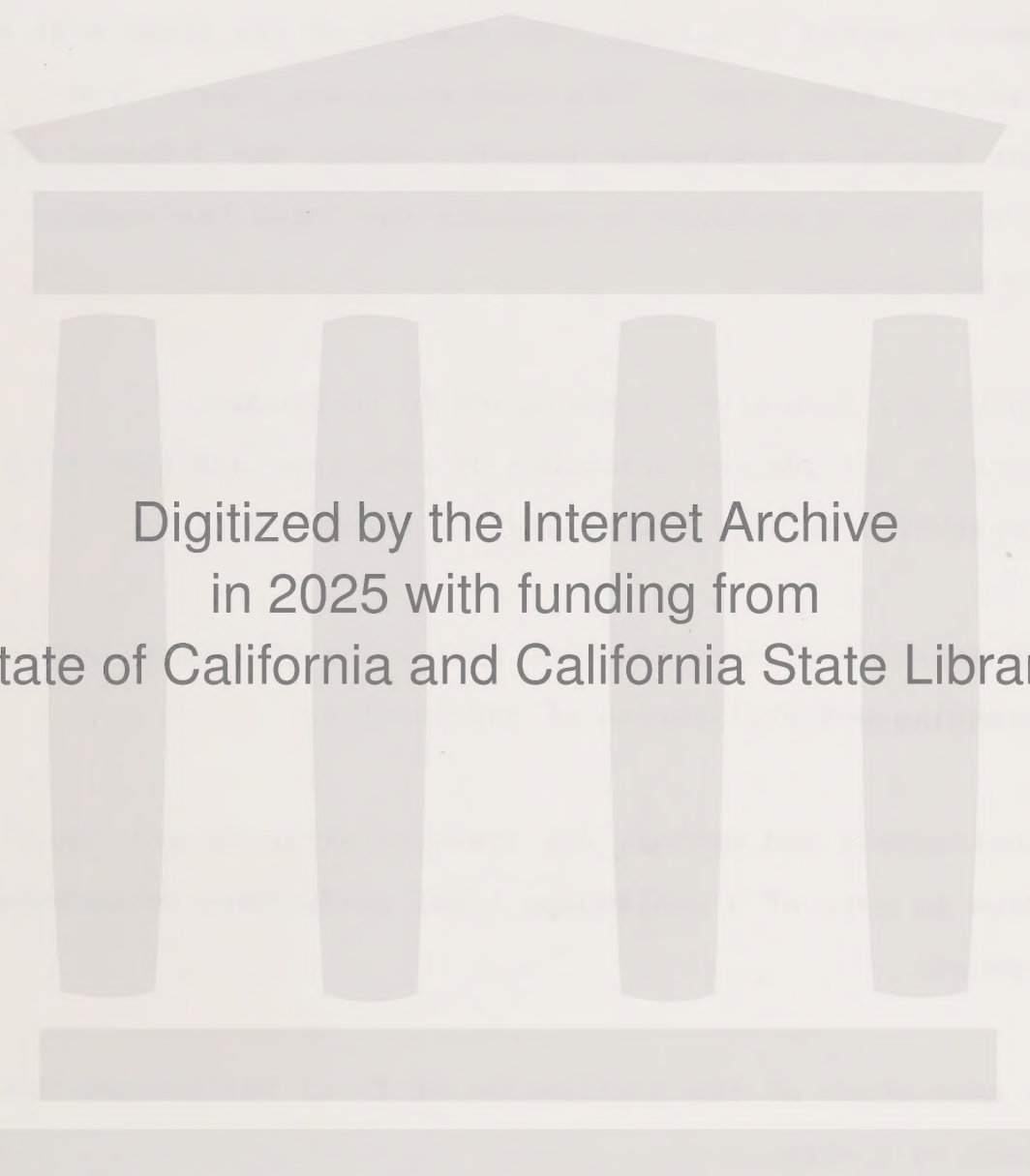
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no account at all of "hard" performance data; it is therefore difficult for management to determine what implications the attitude information has for results.

This study will be a practical application of the Total Performance Measurement concept in a city. The results of the study will be presented in a case study. This case study and others from different levels of government (county, state, and federal) will be the basis for a workshop to evaluate the Total Performance Measurement concept.

In summary, the objective of the study is to produce:

1. data on the current attitudes of employees and customers, together with interpretations and recommendations.
2. an approach to data feedback that helps to assure understanding and utilization of the results.
3. instruments and methods for tracking attitude and "hard" data as part of a continuing total performance measurement system.
4. a case study of the application of Total Performance Measurement in a city.
5. discussion and dissemination of results of the study.



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CONCEPTUAL APPROACH

The Model

Performance has two dimensions. One is the dimension of efficiency which involves the organization of manpower and equipment to perform certain jobs or carry on certain functions and is measured by such techniques as productivity rates, work measurement systems, and standards. The other is an effectiveness dimension dealing with the impact of those jobs or functions on the accomplishment of objectives, their contributions to public needs, and the levels of quality and service. Reliance on productivity measures alone, can, of course, result in misinterpretation and misconceptions about total organizational performance.

During the past year, the Joint Financial Management Improvement Program staff of the Federal General Accounting Office has been experimenting with a supplementary approach to performance measurement -- employee and customer attitude measurement. The model developed in this research consists of four interrelated aspects of management -- productivity, effectiveness, employee attitude, and customer attitude. The integration of attitudinal data with hard measurement data provides a powerful data base for assessing performance. Figure 1 depicts this integration model. As can be seen from the model, employee attitude data is related to both productivity and effectiveness, while customer attitudes relate to effectiveness. For example, employee attitudes will affect the final output in terms of quality and efficiency, while customer attitudes will reflect on the quality of the output or service provided. Attitude measurement, properly administered

TOTAL PERFORMANCE MEASUREMENT SYSTEM

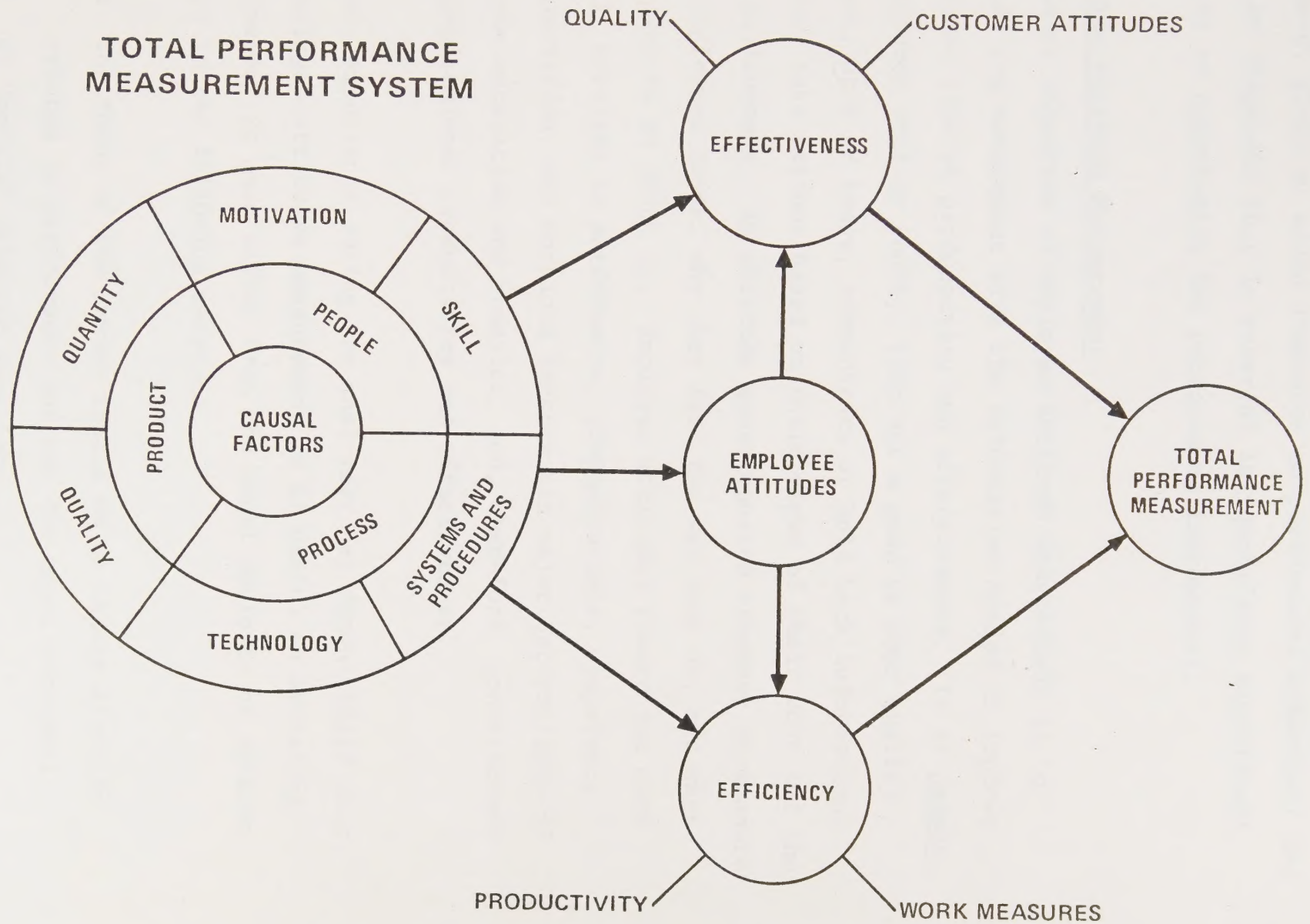


Figure 1

and used, gives an added dimension to performance assessment and problem diagnosis that is powerful in identifying significant targets of opportunity for performance improvement.

Employee Attitude Measurement

The major objective of employee attitude measurement is to provide top management with the information needed to improve the human side of productivity and effectiveness. It is people who produce well or poorly, turn out a good or poor quality product, stay or leave, communicate or hold back information, and they take actions based on their views of their work and the work environment. An attitude questionnaire attempts to measure what employees think, why they feel the way they do, and what they plan to do about it. Employee attitudes toward the work itself, barriers to performance, communications, competence of supervision, and workload factors are major determinants of employee motivation and behavior, and, therefore, contributors to organizational productivity and effectiveness.

However, experience during the past year has demonstrated that, for employee attitudes measurement to be useful in assessing performance, it must differ from the usual employee or opinion surveys in the following respects.

1. The focus of the survey should be on issues directly related to performance and not the usual personnel or "morale" oriented questions.
2. The questionnaire should not be prepackaged but should

include questions about the specific organization, its programs and policies.

3. To assure the involvement and interest of the entire organization in making needed changes, all levels of the organization must be involved in the feedback process. A "bottom-up" approach, where a unit supervisor feeds the results to his or her employees and reports to higher management on the changes they are prepared to make has proven highly effective.

Customer Attitude Measurement

A promising and relatively untapped measurement tool is the use of surveys to obtain direct feedback from customers on the effectiveness of products, programs, and services. Many quality aspects of services cannot be measured in any practical way other than through direct customer surveys. Especially for Government services, customer perceptions represent a major aspect of delivery effectiveness. The Joint Financial Management Improvement Program staff has found that, if surveys are undertaken periodically with several questions repeated each time, the resulting trend can show whether customers perceive improvement or deterioration in the quality of services. Questions that identify the reasons for dislike or non-use of the product, program, or service should also be included to help identify performance deficiencies and repeated again to detect trends. Other uses of customer surveys include pretesting customer demands for new programs or services and seeking customer opinion about the overall policies and practices of an organization. By relating this information to "hard"

measures of performance, management will have comprehensive data on quality, reasons for dislike or non-use of services, potential demands for new programs or services, and indicators of the impact on overall program management.

Knowing how well a product, program, or service meets the valid expectations and needs of the customer is extremely important. In the private sector, the market forces quality control, since the survival of a commercial organization depends upon having satisfied customers. That, in turn, depends upon having a satisfactory product under constant inspection. Unfortunately in the public setting, the same built-in disciplines may not be present. Often, the public agency is the only source of the service so that, enjoying a monopoly, it can vary the quality and timeliness of the service, without knowing its impact. The customer survey can provide valuable information in helping to assess performance.

Data Integration

All four measures are integrated in order to highlight "targets of opportunity" for performance improvement. It is at this point that management must be completely involved in the data analysis. The process of integration can be thought of as a total system, as illustrated in Figure 2. . Three basic steps are involved:

1. Diagnosis of the problems and needs of the organization through the four aspects of performance measurement.
--Identifying the structural factors that can be used in solving problems identified by the diagnosis.

A TOTAL SYSTEMS APPROACH

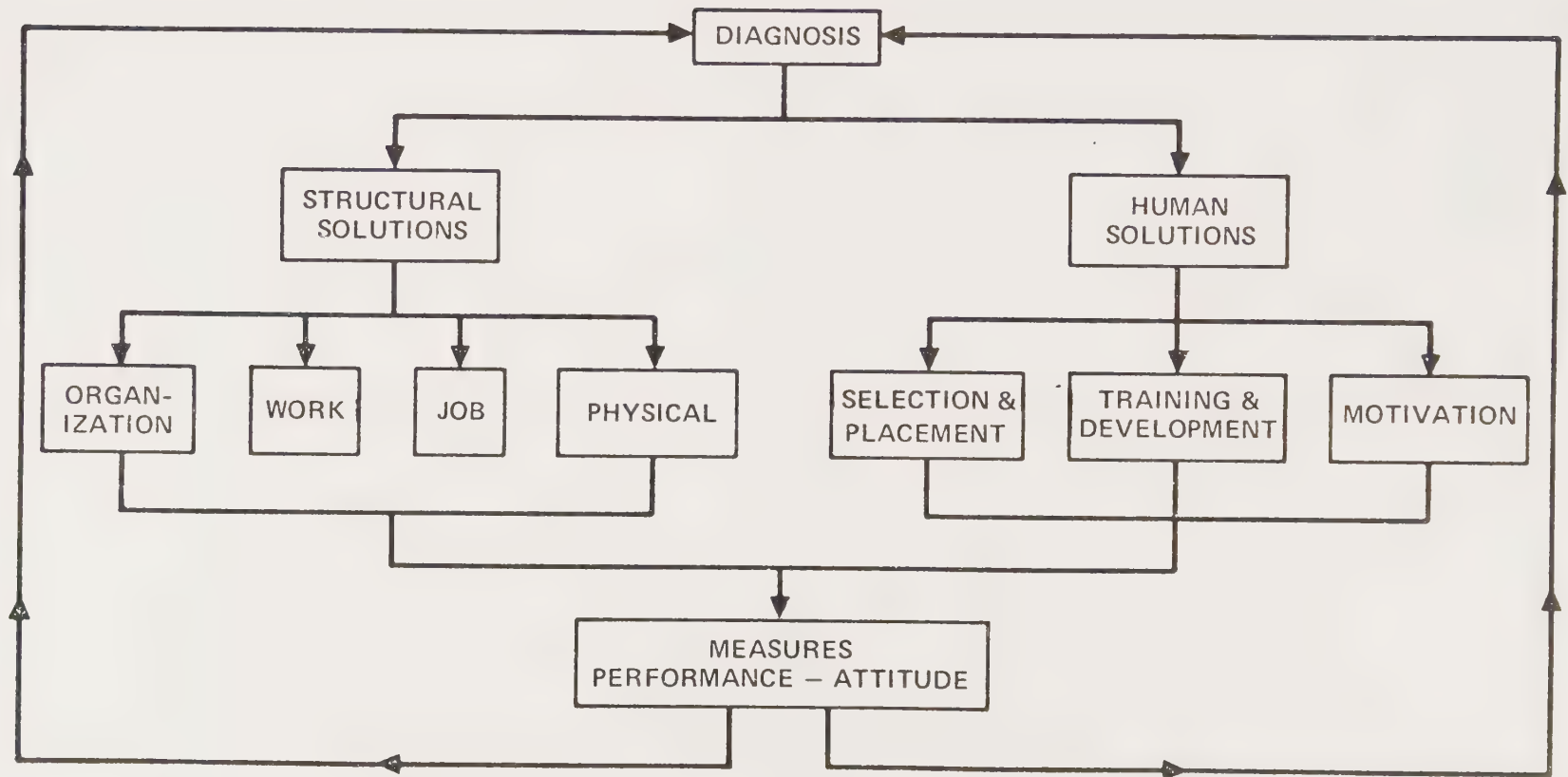


Figure 2

--Identifying the human factor solutions required and how these should be combined with and related to the structural factors.

2. Implementation of approved solutions.

3. Repetition of all four measurements after implementation of the solutions to determine whether the problems initially identified have been overcome. The feedback process should be concerned with how the performance of the organization and the attitudes of the employees and customers may have changed.

The integration of all four measures provides a comprehensive view of present productivity and ways to improve it.

WORK PROGRAM

The work program Sunnyvale proposes to apply the conceptual approach is illustrated in Figure 3; timetable is Figure 4.

The project has seven phases: 1) questionnaire design, 2) questionnaire administration, 3) data processing, 4) analysis, 5) feedback of results, 6) training of supervisors, and 7) follow-up.

Subcategory 100 Questionnaire Design

Initial orientation and interview sessions have already been held with department directors and a sample of employees to determine concerns in the organization.

Questionnaire development will be based on these interview results as well as standard ("core") questions that will allow for comparison with the attitudes of employees in other organizations. The questionnaire is not a "job satisfaction" or "morale" survey in the usual sense. Its key characteristic is that it measures attitudes critical for performance, e.g., motivation to work, competence of supervision, etc.

If additional information regarding citizen evaluation of effectiveness is needed, a separate customer questionnaire will also be designed at this phase.

TOTAL PERFORMANCE MEASUREMENT AND IMPROVEMENT

-WORK FLOW-

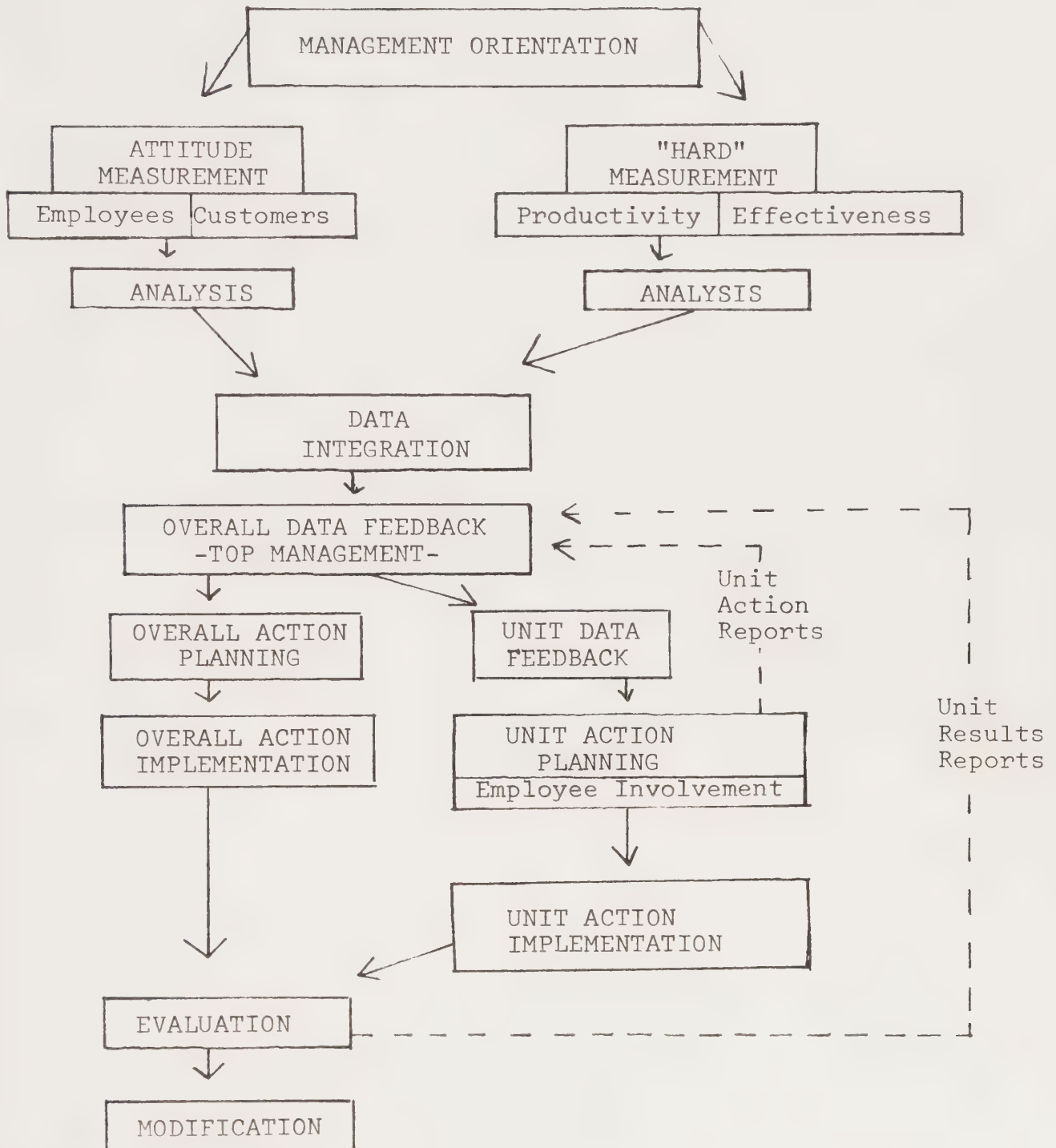


Figure 3

PROJECT TIMETABLE

1975	
September/October	Preliminary Orientation & Investigation
November	Phase 1: Questionnaire Design
December	Phase 2: Questionnaire Administration (Employee)
1976	
January	Phase 2: Questionnaire Administration (Customer)
	Phase 3: Data Processing
February	Phase 4: Analysis (Employee & Customer Survey Quantitative Productivity Data)
March:	Phase 5: Feedback of Results
	Phase 6: Training of Supervisors
April/June	Phase 7: Follow-up Workshop on Results

Figure 4

Product: Employee Questionnaire

Time and Cost: November 1975

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
6	\$635	14	\$7,000	\$1,000	\$8,635
Project Coordinator				Printing of questionnaire	

Subcategory 200

Questionnaire Administration

The questionnaire that is developed will be given to all city employees in groups, at their work site, and on company time.

Employees will be encouraged to participate, but can choose not to participate. Make-up sessions will be held for those employees unable to come to the original sessions.

If additional information is needed from citizens regarding evaluation of services, additional customer questionnaires will be administered during this phase.

Product: Completed Questionnaire

Time and Cost: December 1975

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
19	\$2,012	2	\$1,000		\$3,012
Project Coordinator					

Subcategory 300
Data Processing

The questionnaire will be coded by organizational unit, job code classification and department. Any work group containing seven or more people will be identified as a unit for the ourposes of analyzing and reporting results.

In addition, data will be cross tabulated by demographic characteristics of employees (e.g.: age, race, sex, length of employment with city).

Norms will be computed and compared to those of other organizational units. Program development, coding and standard statistical tests will be included in data processing.

Product: Tabulated Questionnaire Data

Time and Cost: January 1976

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
0	0	5	\$2,500	\$3,000	\$5,500
		programming		computer time	

Subcategory 400
Analysis

The analysis phase will combine the information collected through the employee survey, the customer (citizen) survey, and the quantitative production measures.

Productivity and quality data will be analyzed for validity, complex-

ity and use over time. Suggestions for improvement will be incorporated wherever possible. From a base period, productivity trends for each program and organizational unit will be computed, graphically displayed, and compared with results from the employee and customer surveys.

The analysis will isolate employee perceptions that affect performance, either positively or negatively.

The analysis will highlight customer perceptions of performance and relate those positive and negative evaluations to actual productivity trends and employee assessment.

Product: Analysis by Work Units and Occupational Groups

Time and Cost: February 1976

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
12.5	\$1,324	20	\$10,000	0	\$11,324

Subcategory 500
Feedback of Results

Feedback of results to management would be done in a number of stages. First, the overall data would be thoroughly reviewed with top management of the city. Second, individualized reports would be provided for the managers and supervisors of the units within the organizational units. The data would be displayed and analyzed so as to highlight "targets of opportunity" -- the areas where significant performance improvements are most likely.

We would seek to combine in this effort the diagnostic employee

and customer attitude data with diagnostic "hard" data (productivity, quality, response time, etc.). We would thus be feeding back to management not only what their employees are saying about specific aspects of performance but also what an analysis of the hard data reveals.

Product: Understanding of Data -
10 Sessions with Management Personnel

Time and Cost: March 1976

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
44	\$6,523	3	\$1,500	\$1,000	\$9,023
Management Personnel				Consultant Travel	

Subcategory 600
Training of Supervisors

Management will also develop action plans. For example, immediately after presenting the overall results to top management -- that same day managers and the consultants will begin to specify targets of opportunity and start then and there to work on what they consider to be the major areas for improvement.

Included in the action phase is feedback to employees by their supervisors. This has four purposes. First, we have an obligation to report survey results to employees. Second, it is an excellent vehicle for opening communications between employees and their superiors. Third, it is a powerful management development tool -- perhaps the most powerful available -- in that it provides supervisors with "mirror images" of their own behavior, the "mirrors"

being the people who know them best: their employees. Finally, it gets employees heavily involved in the improvement process. They normally have an enormous amount to contribute -- if only someone would listen. The consultant will train supervisors in this employee feedback process. At this time the supervisors will also be given hard performance measurement data to feedback to their employees. This is where the integration of data and work methods begins.

Product: 10 Training Sessions -
Action Plans

Time and Cost: March 1976

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
44	\$6,524	4	\$2,000	0	\$8,524
Management Personnel					

Subcategory 700
Follow-up

This phase is an evaluation of the action taken. The results of any corrective action taken will be systematically evaluated to see if production and wuality have improved.

It is also during this phase that all agencies participating in a TPM project (federal, state, county and city) will meet to discuss project results and recommendations for future application of the concept in other government agencies. This conference is aimed at the applicability and transferability of Total Performance Measurement.

This phase begins the institution of a system for ongoing diagnosis and evaluation of performance based on employee and customer perceptions and quantitative productivity data.

Product: Review of Implemented Changes;
Agency Conference

Time and Cost: April - June, 1976

CITY		CONTRACTUAL		OTHER	TOTAL COSTS
Work Days	Cost	Work Days	Cost		
9.4	\$993	2	\$1,000		\$1,993
Project Coordinator				Project Inspection Fee	

PROJECT STAFF

The staff for this project will combine the expertise of all levels of governments, private consultants, and city staff to develop a Total Performance Measurement model.

The project staffing pattern is illustrated in Figure 5.

There are three major components: Advisory Board, Policy Board, and Project Team.

Advisory Board

Sunnyvale is one of four government agencies on the West coast involved in a study designed to assess and improve the effectiveness of the organization. The other three government agencies chosen to participate in the study are the State of Washington, federal Department of Housing and Urban Development, and County of Los Angeles. With Sunnyvale's participation, projects will be at all levels of government: city, county, state, and federal.

The Advisory Board of the project will consist of representatives from these other agencies.

The purpose of the Advisory Board is to share information regarding the development of Total Performance Measurement systems at the federal, state, county and city level, and to assist in the dissemination of the results of the various projects.

PROJECT STAFF

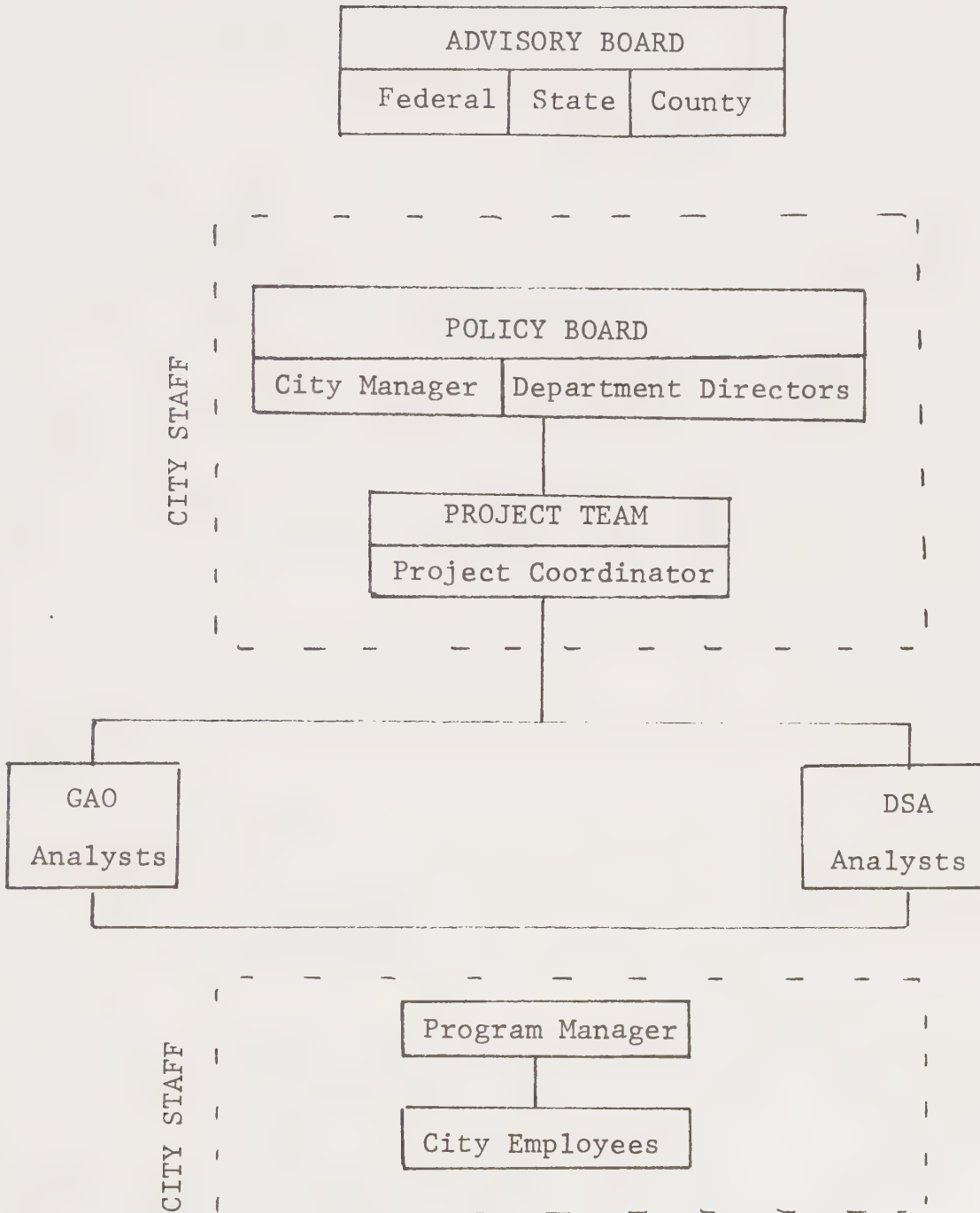


Figure 5

The Advisory Board has already met once to discuss the project and its application in these agencies. The Advisory Board will be convened and called upon as necessary during the development of the Total Performance Measurement systems. The agency interchange already developed will be enhanced throughout the project.

Once all projects are completed, the Advisory Board will hold a workshop to discuss project results, and make recommendations for transfer to other governmental agencies.

Policy Board

The Policy Board consists of the top management in the city: the city manager and eight department directors.

The purpose of the Policy Board is to advise the project team and facilitate the project development.

The Policy Board has already met for initial orientation on the Total Performance Measurement concept and to advise the Project Team on issues of concern to the organization.

The Policy Board will facilitate the development of the project by gathering and revising quantitative productivity data and working with program managers and employees on the results of the attitude surveys (both the employee and citizen surveys).

The Policy Board will be involved throughout the project so that top management will understand and facilitate any

organizational improvements indicated.

Project Team

The Project Team will consist of both city staff and consultants. The team's purpose is to develop a Total Performance Measurement system for the city.

A member of the city manager's staff will be the Project Coordinator and will be responsible for overall administration of the project.

Two teams of consultants will work with the city staff to collect and analyze the data. The consultants used will be those who developed the Total Performance Measurement concept.

Dr. David Sirota of the Wharton School, University of Pennsylvania, and Dr. Brian Usilaner of the General Accounting Office (GAO), completed a Total Performance Measurement project for a section of the GAO which proved to be highly successful. By combining, analyzing, and feeding back measures of performance and attitudes (both of employees and clients), considerable insight was obtained enabling this group to take corrective action to achieve performance and morale improvements.

Dr. Sirota is an Industrial Psychologist specializing in the relationship between employee attitudes and performance, and President of David Sirota Associates (DSA). He has conducted attitude surveys among more than a quarter of a million employees in both the private and public sectors.

Dr. Usilaner is an Industrial Engineer who has headed the government-wide effort to measure and enhance federal productivity. He is currently working with GAO's Joint Financial Management Improvement Project.

Both GAO and DSA will use additional analysts on their staffs as necessary.

Additional information on the project staff is included in the appendix.

Dr. Usilaner will work with department directors and program managers to collect and analyze the quantitative productivity data.

Dr. Sirota will work with department directors, program managers and city employees to collect employee attitude data. He will also analyze the citizen survey data and collect additional customer attitude data if necessary.

The project staffing is designed to utilize the expertise of all levels of government, consultants, and all the city staff in developing a workable Total Performance Measurement system.

SUNNYVALE'S QUALIFICATIONS

Sunnyvale is uniquely qualified to undertake this project. The background work done in Sunnyvale over the past eight years provides a solid basis for advancement.

Present Management System

In 1967, the city undertook the development of an integrated management information system which would provide maximum benefits to citizens at minimum cost. Officials needed a better method to predict and control city programs and operations. The result of this effort was an on-line, real-time computerized information system that supports an operational Planning Programming Budgeting System and a program-centered organization structure. The system consists of ten information system modules for the functional areas of accounting, personnel-payroll, utilities, purchasing, inventory, equipment control, fixed asset accounting, public safety (police and fire), library, and environmental information. These modules supply the means for planning and controlling programs.

A sample program is illustrated in Figure 6. It is from the 1974-75 Resource Allocation Plan (budget). There are 63 operational programs in five functional areas managed by 50 program managers. Programs are planned eight years into the future. The sample shows one program's budget for fiscal year 1974-75. The program is "Investigations," one of nine programs in the "Protective Services" function. As with all other programs in the city, there is an overall objective, specific quality goals (effectiveness measures) set for the year, a production unit and unit

City of Sunnyvale
RESOURCE ALLOCATION ANALYSIS

- PROGRAM — 332.10 Investigations
FUNCTION — Protective Services
OBJECTIVE — Detect, deter and apprehend law violators through investigations

Fiscal Year	Work Hours	Total Cost of Resources	Production Units*	Unit Cost
1970-1971	Actual 17,869	171,927	1,227	140.12
1971-1972	Actual 17,596	174,780	1,249	139.94
1972-1973	Actual 19,230	225,407	1,290	174.73
1973-1974	Estimated 14,080	188,851	1,330	141.99
1974-1975	PROPOSED 17,120	253,936	1,397	181.77
1975-1976	Projected 17,120	270,359	1,457	185.56
1976-1977	Projected 17,120	283,608	1,530	185.36
1977-1978	Projected 17,120	296,441	1,600	185.28
1978-1979	Projected 17,120	310,975	1,620	191.96
1979-1980	Projected 17,120	323,137	1,640	197.03
1980-1981	Projected 17,120	336,322	1,660	202.60
1981-1982	Projected 17,120	349,457	1,680	208.01

* Cases handled
SPECIAL NOTES —

- Quality Goals
- For index crimes, maintain departmental clearance rate above nationwide clearance rate
 - Reduce recidivism among youthful offenders by 10% for the 3-year period 1974 - 1977
 - Improve management of case investigations
 - Maintain high level of department integrity and a city free of organized crime
- Fiscal Year Production Plan
- Conduct 1,397 follow-up investigations
 - Program supervision
 - Review 1,158 reports of juvenile contacts
 - Conduct 880 interviews and make appropriate referrals
 - Attend monthly liaison meetings between department and community resources
 - Provide support, case control and supervision
 - Conduct special investigations at the direction of the chief

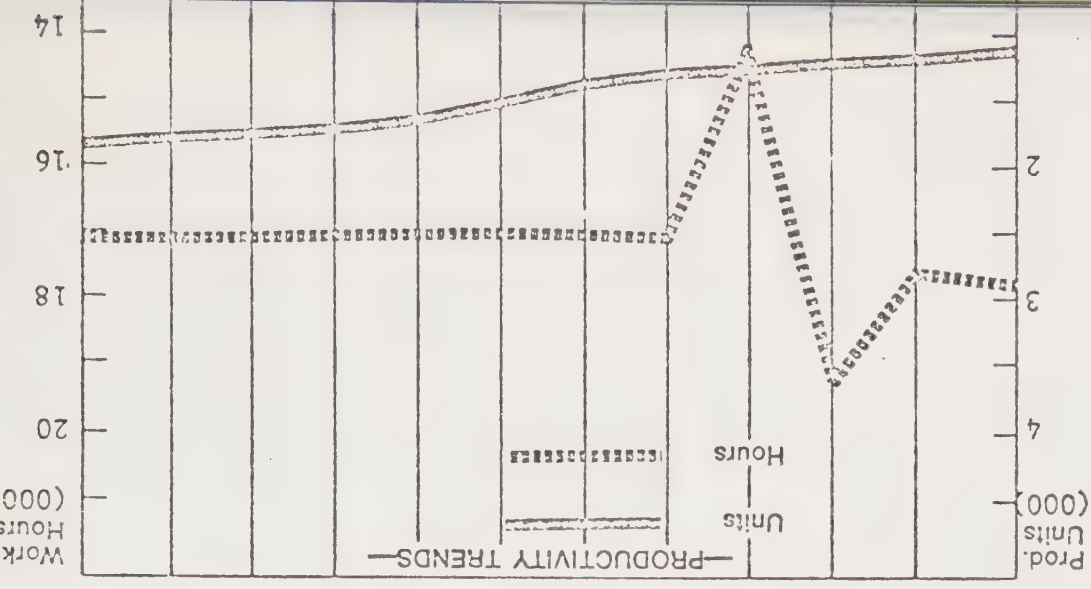


Figure 6

cost determined for four past years, the current year, and seven future years. The graph illustrates productivity trends by comparing input (resources are expressed in terms of workhours) to output (production units). This program budget is formulated by the responsible program manager and then refined with the department director before presentation to the manager and then to the city council. Through all levels of review, resources are allocated according to objectives, with workhours and production goals receiving prime attention.

Sunnyvale's budgeting process provides the basis for collecting the "hard" productivity data needed for Total Performance Measurement.

Performance Auditing Pilot Project

Sunnyvale began its formal work with performance auditing in the fall of 1973 as one of 14 cities participating in a performance auditing project sponsored by the International City Management Association (ICMA) and the General Accounting Office. This project was built upon eight years of experience with advanced computer-based management information systems. Sunnyvale worked for ten months with the public accounting firm of Peat, Marwick, Mitchell & Co. (PMM & Co.) and the General Accounting Office to develop a sample audit guide and process that would be understandable, useful and applicable to police and fire services.

The city is currently using the resulting audit guide in police and fire services. Peat, Marwick, Mitchell & Co. conducted Sunnyvale's first first formal independent performance audit of

public safety in August, 1975 in conjunction with the financial audit.

One of the 14 test cities in the ICMA/GAO project, Sunnyvale's was the only successful pilot program. It has gained acceptability in the financial community being formally endorsed by Peat, Marwick, Mitchell, & Co. and the Municipal Finance Officers Association (MFOA). The project has increased Sunnyvale's ability and desire to collect and use the "hard" productivity data required in Total Performance Measurement.

Citizen Survey

Established city services have been compared with citizens' assessments and alternatives through a citizen survey completed in November, 1974. The survey not only tested the effectiveness of current city services, it also tested the priority (importance) of services, what citizens were willing to pay or trade to get new or different services.

Thirty-minute, in-person interviews, conducted by an independent opinion sampling firm, were the basis for a day-long citizen workshop where 550 people heard results and formed ten task forces to develop new priorities and programs, most of which have been implemented.

Information and the process developed from this survey will assist in collecting the customer attitudes needed for Total Performance Measurement.

Research Attitude

The projects and processes described above illustrate a management orientation receptive to innovation and focusing on results. The climate in Sunnyvale is well-suited both to the testing of theory and to the solution of practical problems. M. Frank Heisman (Director, Office of Intergovernmental Science and Research Utilization, National Science Foundation) points out the importance of this research climate by his statement:

"Our ability to perform research now exceeds our capabilities to apply it in local government, or even to communicate in a decision-related context that the information exists."

--(Public Management, April 1975)

Sunnyvale is uniquely qualified to do the needed research and to apply Total Performance Measurement in a city.

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